

PATENT
229436-1 (553-1371US2)

IN THE CLAIMS

1. (currently amended) A computer program product residing on a non-transitory computer readable medium, for use in a medical-imaging environment, the computer program product comprising instructions for enabling a computer to:

acquire ultrasound image data for at least a portion of a body organ;

generate and define at least one other plane with respect to [[a]] an arbitrary reference plane for the body organ based on body organ specific data including spatial positions within the organ that defines a relationship of the at least one other plane to the reference plane, the at least one other plane being a standardized plane; and

display automatically and substantially simultaneously at least two ultrasound images corresponding to at least one of the reference plane and data defining the at least one other plane.

2. (original) The computer program product according to claim 1, wherein the body organ is a fetal heart.

3. (original) The computer program product according to claim 2, wherein the reference plane is a four-chamber view.

4. (original) The computer program product according to claim 2, wherein the data defining the at least one other plane comprises data defining at least one of: a right ventricular outflow tract image, a left ventricular outflow tract image, a ductal arch image, an aortic arch image, a venous connections image, and a three vessel view image.

5. (original) The computer program product according to claim 1, wherein the organ is a fetal head.

6. (previously presented) The computer program product according to claim 5, wherein the reference plane is of a biparietal diameter of the fetal head.

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7. (original) The computer program product according to claim 1, wherein the processing by the computer is associated with sonography equipment.

8. (canceled)

9. (original) The computer program product according to claim 1, further comprising instructions for causing the computer to provide a medical evaluation of the imaged organ.

10. (original) The computer program product according to claim 9, wherein image recognition software is used to facilitate at least one of location of standardized planes and the medical evaluation.

11. (original) The computer program product according to claim 9, wherein the medical evaluation comprises the steps of:

recognizing a specific structure within an image;

comparing the structure to a reference image; and

identifying at least one of normal and abnormal anatomical characteristics of the structure.

12. (original) The computer program product according to claim 1, wherein the display of the at least two ultrasound images comprises for each image sagittal, transverse and coronal planes.

13. (original) The computer program product according to claim 12, wherein the display is a real time display.

14. (original) The computer program product according to claim 1, wherein the display of the at least two ultrasound images comprises a display of a single plane associated with each of the at least one other plane.

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15. (original) The computer program product according to claim 1, wherein the display of the at least two ultrasound images comprises a real time display, of one or more standardized planes, directly from a real time volume acquired at a reference level.

16. (currently amended) A method comprising:

acquiring ultrasound image data for at least a portion of a body organ;

generating and defining at least one other plane with respect to [[a]] an arbitrary reference plane for the body organ using a spatial mathematical relationship of the at least one other plane to the reference plane for the body organ based on spatial positions within the organ; and

displaying automatically and substantially simultaneously at least two ultrasound images corresponding to at least one of the reference plane and data defining the at least one other plane.

17. (currently amended) A system comprising:

a transducer for acquiring ultrasound image data for at least a portion of a body organ, wherein the ultrasound image data is acquired at an arbitrary location with respect to the portion of the body organ;

a processor for processing the ultrasound image data to define a reference plane for the body organ and to generate and define at least one other plane with respect to the reference plane using a spatial mathematical relationship of the at least one other plane to the reference plane for the body organ based on spatial positions within the organ; and

a display, wherein said processor facilitates displaying substantially simultaneously at least two ultrasound images corresponding to at least one of the reference plane and data defining the at least one other plane.

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18. (currently amended) The computer program product according to claim 1, further comprising using a spatial mathematical relationship based on statistically generated data for the body organ to generate and define the one other plane.

19. (previously presented) The computer program product according to claim 18, wherein the spatial mathematical relationship comprises at least one formula that relates the reference plane to the at least one other plane to define one of a shift and a rotation from the reference plane to the at least one other plane.

20. (previously presented) The computer program product according to claim 19, wherein the at least one formula is based on a user selection.

21. (previously presented) The computer program product according to claim 1, wherein the body organ specific data comprises fetal organ data corresponding to a number of gestational weeks.